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DATE: JANUARY 10, 2008 PAGE 1 OF: 11

TO: USPTO FACSIMILE NO.: (571) 273-8300

FROM: GARY P. OAKESON TRANSMITTED BY: BRENDA WISEMAN

OUR DOCKET NO.: 200401024-1

FOR: WEAK BASE MODIFICATION OF POROUS INK-JET MEDIA COATING FOR ENHANCED IMAGE QUALITY

SUBJECT: APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

Attached please find a Reply Brief under 37 C.F.R. § 41.41 for Docket No. 200401024-1, Application No. 10/774,917.

Thank you. We await your confirmation of receipt.

Respectfully submitted,

Gary P. Oakeson
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PATENT APPLICATION

ATTORNEY DOCKET NO. 200401024-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Peter C. Zahrobsky

Application No.: 10/774,917

Filing Date: 02/06/2004

Confirmation No.: 8858

Examiner: Betelhem Shewareged

Group Art Unit: 1794

Title: WEAK BASE MODIFICATION OF POROUS INK-JET MEDIA COATING FOR ENHANCED IMAGE QUALITY

Mail Stop Appeal Brief - Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on 11/19/2007.

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

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Respectfully submitted,
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Rev 10/07 (ReplyBrf)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT:	Peter C. Zahrobsky
SERIAL NO.:	10/774,917
FILING DATE:	02/06/2004
CONF. NO.:	8858
FOR:	WEAK BASE MODIFICATION OF POROUS INK-JET MEDIA COATING FOR ENHANCED IMAGE QUALITY
ART UNIT:	1794
EXAMINER:	Betelhem Shewareged
DOCKET NO.:	200401024-1

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

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APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

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Mail Stop Appeal Brief – Patents

Sir:

Appellants submit this Reply Brief in response to the Examiner's Answer mailed on November 19, 2007 in connection with their appeal from the final rejection of the Patent Office, mailed October 4, 2007, in the above-identified application.

STATUS OF CLAIMS

Claims 1-23 and 25-47 remain pending. Claim 24 has been canceled. Claims 1-13 and 31-47 have been withdrawn. The claims on appeal in this application are claims 14-23 and 25-30.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue presented for review is whether claims 14-23 and 25-30 are unpatentable under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,492,005 (hereinafter "Ohbayashi") in view of U.S. Patent No. 6,129,785 (hereinafter "Schliesman") and U.S. Published Patent Application No. 2003/0064206 (hereinafter "Koyano").

ARGUMENT

A. Examiner's Answer

The following paragraph summarizes the Examiner's 103 rejections and the Examiner's response to the Appellants' arguments. The following section B addresses those arguments that have been presented by the Examiner in response to the Appellants' previous arguments. The Appellants refer the Board of Appeals to the Appeal Brief for a more complete summary of Appellants' positions, as supplemented by the present Reply Brief.

1. In rejecting claims 14-23 and 25-30, the Examiner alleges that Ohbayashi discloses an ink-jet recording sheet comprising a support; an ink absorptive layer on the support; and a recording layer comprising a binder, inorganic particles, a hardener, and a pH adjustor. The Examiner then alleges that the pH adjustor and the hardener react with one another, forming bubbles and that such a reaction is inherent in the ink absorptive layer. However, the Examiner acknowledges that Ohbayashi fails to teach that the ink absorptive layer has the claimed pH value. To cure this deficiency, the Examiner then cites Schliesman as teaching such a pH. The Examiner also acknowledges that Ohbayashi in view of Schliesman fails to teach the use of lithium as a pH adjusting agent. To cure the deficiency, the Examiner cites Koyano as allegedly teaching such a pH adjusting agent.

2. In response to Appellants' argument that the claimed element of an alkali metal present in the ink receiving layer at from 0.4-10 wt% has not been shown, the Examiner responds that additives are generally added in small amounts and that since the reference does not teach any ranges, it would have been obvious to one skilled in the art to adjust the amount of potassium carbonate.

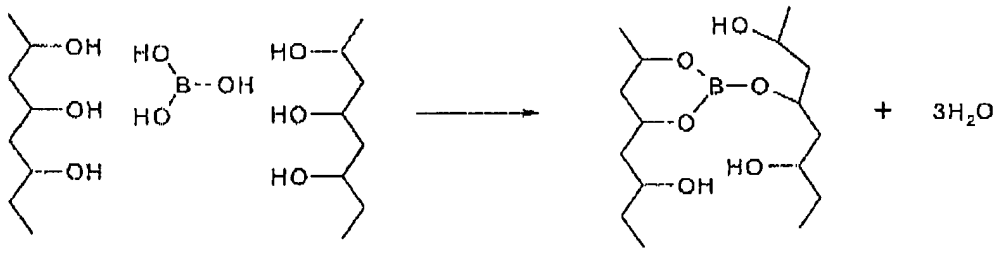
3. In response to Appellants' argument that the lithium hydroxide of Koyano is not a weak base, the Examiner responds that Koyano was not cited to teach lithium hydroxide, rather it was cited to teach lithium carbonate as a weak base.

4. In response to Appellants' argument that the gas bubbles in the ink-receiving layer has not been shown, the Examiner alleges that the hardener in Ohbayashi would react with all of the other components in the layer. The Examiner has also stated that Appellants have never provided factual evidence to show that there is no reaction whatsoever between the pH adjustor and the hardener.

B. Ohbayashi/Schliesman/Koyano

One major difference between the Appellants' position and the Examiner's position is whether bubbles form in the ink-receiving layer in Ohbayashi. The Examiner has argued that such bubble formation, even though not taught, would be inherent because the hardener in Ohbasyashi would react with the other components in the ink-receiving layer including a possible pH adjustor of lithium carbonate. However, the Examiner has not fully understood Appellants' arguments regarding this issue.

First, Appellants have shown that the hardening reaction in ink-receiving layers is well-known and consumes the hardener during the process. As previously presented, the following reaction schematic illustrates this point:



As shown above, when boric acid is used in this fashion, it is consumed during the cross-linking process. Therefore, boric acid could not subsequently react with potassium carbonate to generate the gas bubbles as recited in independent claim 14. In other words, Ohbayashi cannot use boric acid in the manner alleged by the Examiner since boric acid is consumed (and neutralized) during the cross-linking reaction. As previously noted, the use of boric acid in this fashion (as a hardening agent) is well-known in the art. Therefore, based on the teachings of Ohbayashi, boric acid could not be used to generate gas bubbles.

Appellants then argue that if potassium carbonate were combined with boric acid as presently disclosed, such a reaction would frustrate the hardening described in Ohbayashi, thereby destroying the function of Ohbayashi, since the boric acid would be neutralized during the bubble formation process and then could not cross-link the polyvinyl alcohol as taught in Ohbayashi. In other words, Appellants submit that the explicit teachings of Ohbayashi fail to teach each and every element of the pending claims set. Furthermore, Appellants submit that the inherency relied upon by the Examiner (i.e., bubble formation), even if possible, would destroy the functionality of Ohbayashi.

Next, Appellants wish to address the Examiner's use of inherency. The Examiner is relying on inherency to teach bubble formation, but such reliance is improper to establish a proper 103 rejection. Specifically, Appellants wish to provide the current case law regarding the use of inherency in establishing a proper 103 rejection. In In re Rijckaert, the Court concluded that even though the Board had found that a certain condition was known to be optimal, the Court concluded that the condition was not necessarily inherent and overturned the 103 rejections based on

such inherency, 9 F.3d 1531, 1533-34 (Fed. Cir. 1993). Specifically, the Court provided several inherency standards applicable to obviousness, including:

> "[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient [to establish inherency.]" In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981) (citations omitted). "That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." In re Spormann, 53 C.C.P.A. 1375, 363 F.2d 444, 448, 150 USPQ 449, 452 (CCPA 1966). Such a retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection. See In re Newell, 891 F.2d 899, 901, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989).

As applied to the present case, the mere fact that boric acid and potassium carbonate may form bubbles is not enough to establish inherency. Additionally, even if the present combination of materials may be inherent, the present combination of materials that formed bubbles was not known based on the teachings of the present references.

Additionally, Appellants wish to address the Examiner's contention that the alkali metal concentration would be obvious to one skilled in the art. The Examiner has justified this conclusion using two reasons. First, the Examiner has alleged that additives are known to be generally added in small amounts. Such a statement has no basis in fact but is merely the Examiner's supposition. In fact, Appellants regard such a statement as erroneous and misleading. Simply because an "additive" can be added in a small amount clearly does not provide a teaching that an additive would necessarily be added in such an amount. Clearly, the context of the invention would dictate the amount needed. In the present case, the Examiner has found a reference that teaches an alkali additive as a pH adjustor, and as such, any hypothetical amount of such additive used for that purpose would have no bearing when the additive is used for a completely different purpose, i.e., bubble formation.

Second, the Examiner has stated that since the reference is silent on the amount, it would be obvious to one skilled in the art to adjust the amount of potassium carbonate to control the pH value of the layer. However, as previously argued, the motivation to adjust the pH of the layer has no bearing on the amount needed to form bubbles. As such, by the Examiner's own admission, since one skilled in the art would be attempting to add enough potassium carbonate to control the pH, one skilled in the art would not adjust the amount of potassium carbonate to form bubbles and arrive at the presently disclosed ranges. These arguments further underscore the fundamental difference between Appellants' position and the Examiner's position, i.e., the lack of teaching regarding bubble formation in the ink-receiving layer.

Furthermore, Appellants wish to address the Examiner's lack of response with respect to dependent claims 15, 22, and 23. As previously present in the Appeal Brief, the Examiner has stated that "the use of lithium containing pH adjusting agent such as lithium carbonate is well known . . ." in citing Koyano. However, close inspections of Koyano reveals that such compounds are used to maintain the pH near neutral or even as a basic solution. See [0156]. Therefore, one skilled in the art would not use such a well-known basic compound to achieve the acidic pHs as found in dependent claims 22 and 23 or the excess acidic solution found in claim 15. Likewise, one skilled in the art would not use a basic pH adjuster, including the potassium carbonate, of Ohbayashi. As such, with regard to dependent claims 15, 22, and 23, the present rejection would not only destroy the functionality of the gas bubble formation, but would also destroy the functionality of achieving the recited pH.

Because the asserted combination fails to teach every element of independent claim 14 and the respective dependent claims, including the alkali metal present in the ink-receiving layer at from about 0.4 wt% to about 10 wt% and the gas generated bubbles in the ink-receiving layer, Appellants submit that these claims present patentable subject matter, and the rejections of these claims should be overturned.

CONCLUSION

Appellants respectfully submit that the claims on appeal set forth in the Appendix of Appellants' Appeal Brief are patentably distinct from the asserted prior art references. Particularly, none of the asserted combinations of references teach each and every element of the claimed invention.

For these reasons, Appellants respectfully request that the Board of Appeals reverse the rejections and remand the case to the Examiner for allowance.

Please charge any fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 10th day of January, 2008.

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